



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Gabriella S. Lopez	Project Number J1508
Project Title The Five-Second Rule: Safe or Sorry? Is Food Safe to Eat after Five Seconds on the Ground?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My science project is to challenge the validity of the five-second rule for dropped food. I tested this rule by using a wet food and a dry food. I used Bologna for the wet and Unsalted Crackers for the dry food. I conducted three trials with each food item being dropped, for five seconds, at the school crosswalk and the ground in front of the lunch area water fountain. For comparison, I also conducted three control trials for each food item.</p> <p>Methods/Materials I did my experiment by preparing Petri dishes with agar. I conducted three five-second drop tests for each food item, at each location. After picking up dropped food I swabbed the food item and transferred to prepared labeled Petri dishes. I prepared three control dishes for each food item. I put every swabbed Petri dish in a homemade incubator with a constant temperature of 90° F. At every 24-hour interval I photographed, inspected, measured and recorded the growth and quantity of bacteria colonies.</p> <p>Results The results of my experiment are that there is bacteria on the ground and five seconds do not protect you from those bacteria. Through my testing I was also able to determine that the crosswalk has more bacteria than the ground by the water fountain and bologna picks up more bacteria than crackers.</p> <p>Conclusions/Discussion My conclusion from this experiment is that I discovered that there are bacteria everywhere and it only takes a second of contact to transfer bacteria. This project could benefit the children at our school because almost all of them believe in the five-second rule. If they knew that they could get very sick from the bacteria on the ground then I know they would think twice before eating what was dropped.</p>	
Summary Statement I challenged the validity of the five-second rule for dropped food and I discovered that food is contaminated on contact.	
Help Received Brother drove me around to test locations and helped me time the drops with a stop watch. My mother helped me type my report. My teacher, Mr Fox, provided me the petri dishes, agar and encouragement.	